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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,274	12/16/1999	ITSUO WATANABE	7426-0067	5733

7590

01/29/2002

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 01/29/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-11

Office Action Summary

Application No.
09/402,274

Applicant(s)
WATANABE ET AL.

Examiner
LAVILLA

Art Unit
1775



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

30 days

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ~~ONE~~ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 8, 9, and 19-45 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1, 2, 8, 9, and 19-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Election/R strictions

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
3. In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.
4. Group I, claim(s) 1, 2, 24, 28-34,36, and 38, drawn to a circuit connecting material that contains a hydroxyl containing resin.
5. Group II, claim(s) 8, 9, 25-27, and 37, drawn to a circuit connecting material lacking a hydroxyl group containing resin and containing a curing agent of specified half-life.
6. Group III, claim(s) 35, drawn to a circuit containing material defined in terms of its DSC profile.
7. Group IV, claim(s) 20, 22, 39, 41, 42, and 44, drawn to a method of making circuit terminal and article made thereby having a circuit material that contains hydroxyl group containing resin.
8. Group V, claim(s) 21, 23, 40, and 43, drawn to a method of making circuit terminal and article made thereby having a circuit material that lacks a hydroxyl group containing resin and contains a curing agent of specified half-life.
9. Group VI, claim(s) 19 and 45, drawn to a method of making circuit terminal and article made thereby made from any radically polymerizable connecting material.
10. The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:
 - I. Group I does not relate to a single inventive concept of any other group since the technical feature of the connecting material of Group I is not common with any other group and since the connecting material is known in the art. Group I requires a curing agent that generates free radicals upon heating and requires a hydroxyl containing resin and a


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free-radical polymerizable substance. Groups II and V lack that hydroxyl containing resin and demands a curing agent of specified half-life properties. Group III lacks hydroxyl containing resin and curing agent; rather the material is defined in terms of its DSC profile. Group VI resins are generic, thereby sharing no common technical feature with Group I resins. Group I does not relate to a single inventive concept of Group IV because the connecting material of Group I is known in the art as seen in JP 50-126954 (Abstract), wherein the use of hydroxyl resins having MW of 10000 is taught.

- II. Group II does not relate to a single inventive concept of any other group since the technical feature of the connecting material of Group II is not common with any other group. Group II does not relate to a single inventive concept of Group V because the connecting material of Group II is known in the art as seen in USP 5,475,048 (column 4, line 60 through column 5, line 53), wherein the same free radical half-life property is disclosed as desirable and obtained with materials analogous to those of applicant.
- III. Group III does not relate to a single inventive concept of any other group since the technical feature of the DSC profile of the connecting material of Group III is not common with any other group.
- IV. Group IV does not relate to a single inventive concept of any other group. With respect to the connecting materials, including Group I, these have been distinguished above. Moreover, there is no shared inventive technical feature with Groups V and VI with respect to the circuit structure and method other than the connection material because the circuit structure and method, other than connection material, are known in the art as seen in JP 08-325543 (Abstract and Figures) and JP 06-295617 (Abstract and Figures).
- V. Group V does not relate to a single inventive concept of any other group. With respect to the connecting materials, including Group II, these have been distinguished above. Moreover, there is no shared inventive technical feature with Groups IV and VI with respect to the circuit structure and method other than the connection material because the circuit structure and method, other than connection material, are known in the art as seen in JP 08-325543 (Abstract and Figures) and JP 06-295617 (Abstract and Figures).
- VI. Group VI does not relate to a single inventive concept of any other group. With respect to the connecting materials, these have been distinguished above. Moreover, there is no shared inventive technical

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feature with Groups IV and V with respect to the circuit structure and method other than the connection material because the circuit structure and method, other than connection material, are known in the art as seen in JP 08-325543 (Abstract and Figures) and JP 06-295617 (Abstract and Figures).

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11. It is remarked that Claims 38, 41, and 44 have been placed in Groups I and IV since original and now cancelled claim 12 depended from Claim 1, among others. Claim scope commensurate with elected claims or cancellation should be provided in applicant's response.
 12. It is remarked that Claims have been renumbered, consistent with pending claims pending in the application. Applicant's Claim 23 is now Filewrapper Claim 19, with subsequent claims renumbered accordingly.
 13. A telephone call was not made to Mr. Miller on 14 January 2002 to request an oral election to the above restriction requirement due to the complexity of the restriction requirement.
 14. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).
 15. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
 16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael LaVilla whose telephone number is (703) 308-4428. The examiner can normally be reached on Mondays and Tuesdays.

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17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

18. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Michael LaVilla
January 28, 2002

A handwritten signature in black ink, appearing to read 'Michael LaVilla', written in a cursive style.